

ABSTRACT

A broadband multi-server proxy server BMPS) and method of operation enables customers to select an ISP of their choice for services available from the Internet. A broadband network includes a multi channel cable coupled at one end to a plurality of customers and a home network serving several stations within a location. The network is coupled at the other end to head end equipment providing cable services to the cable customers. Each customer is assigned a Medium Access Control (MAC) address on the network. The head end equipment is linked to a modem management system and a router. The BMPS has a database containing customer service information and is coupled to the router. The MAC addresses of the cable customers are stored in the database. An Internet Service Provider network is coupled to the router and serves a plurality of Internet Service Providers (ISP), each ISP being linked to the Internet. In operation, the cable customers register with the ISPs of their choice. The ISPs send the customers a customer ID, password, a log on script and updates its database and the database of the BMPS with the customer information. The BMPS authorizes the customer modem and router for access to the ISP. As part of a customer's logon request, the MAC address is attached to identify the origination point of the request. The logon script sends the logon request in an extended DHCP message to the ISP via the BMPS for an Internet address. The BMPS checks the logon request against the database to verify a legitimate customer and obtains the customer profile for management and billing purposes. The BMPS sends the logon request to the requested ISP using the customer ID, password and the BMPS as the source address for any customer message. The ISP verifies the customer address again its database and updates the router address tables to accept customer messages with the new address. Normal customer ISP

traffic begins. Return message to the customer are received by the BMPS which forwards the
25 messages to the customer at their MAC address.